

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

3-01

☐ Other ☐ Amendment Number:

Contract Number

EP-D-13-005

Contract Period 01/01/2013 To 12/31/2017

Base

Option Period Number 2

Title of Work Assignment/SF Site Name

CSN Assessment Communication

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and paragraph of Contract SOW

Tasks 3 & 11

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 01/06/2015 To 12/31/2015

Comments:

Title: Chemical Speciation Network (CSN) Assessment Communication. This is a continuation of Work Assignment 2-07. This WA includes 50 hours to prepare the work plan and begin work. See Task 1 for work plan requirements. To the best of our knowledge, this work does not duplicate any work previously performed, or currently being performed by this office.

Accounting and Appropriations Data

☒ Non-Superfund☐ Superfund

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

SFO (Max 2) ☐

| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
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Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

01/01/2013 To 12/31/2017

This Action:

50

50

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee:

LOE:

Work Assignment Manager Name Joann Rice

Branch/Mail Code:

Phone Number 919-541-3372

FAX Number:

(Signature)

(Date)

Project Officer Name Jeff Curry

Branch/Mail Code:

Phone Number: 919-541-4018

FAX Number: 919-541-4267

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Antonio L. Leathers

Branch/Mail Code:

Phone Number: 919-541-2312

FAX Number:

(Signature)

(Date)

Contract Number: EP-D-13-005
Contractor: Battelle Memorial Institute
Work Assignment Manager: Joann Rice

Work Assignment Number: 3-01

STATEMENT OF WORK

I. TITLE: “Chemical Speciation Network (CSN) Assessment Website”

II. BACKGROUND

In 2014, the Chemical Speciation Network (CSN) consisted of approximately 190 ambient air monitoring sites across the US. These sites collect aerosol samples over a 24-hour period on filters that are analyzed for PM_{2.5} mass, trace elements, major ions and organic and elemental carbon. The primary objectives of the CSN are to support PM_{2.5} regulatory implementation, support health effects and exposure research studies, and to provide nationally consistent data for the assessment of trends and a long-term record of the chemical composition of PM_{2.5}. EPA has conducted an assessment of the CSN in an effort to create a network that:

- Is financially sustainable going forward;
- Redistributes resources to new or high priorities from those of low-priority or low-benefit;
- Extracts more value from the existing network; and,
- Fully leverages the value of other existing monitoring networks.

As CSN operational and analytical costs continue to rise in a constrained federal budget environment, changes are necessary to maintain long-term viability of the program. The CSN assessment concluded in 2014 with recommendations that include:

- Discontinuation of CSN PM_{2.5} mass measurement at stations where Federal Reference Method (FRM) PM_{2.5} mass is collocated;
- Discontinuation of funding for laboratory analysis at 42 sites;
- Reduction in the number of blanks associated with the carbon aerosol analysis;
- Reduction in sampling frequency; and
- Reduction in the number of ice packs used to ship filters during the colder months of the year.

The recommendations made regarding network changes and the information leading to these recommendations need to be readily accessible by stakeholders on a publically-assessable website.

III. STATEMENT OF WORK

Note: The Contractor shall not publish or present results from this work assignment without prior notification and review by EPA.

The Contractor shall provide the following:

TASK 1 – Revised Cost Estimate and Delivery Schedule

This work assignment is a follow-on to WA 2-07. A new work plan is not required. The contractor shall submit a revised cost estimate, broken out by task and subtask, and a revised delivery schedule in accordance with the terms of the contract.

TASK 2 – CSN Assessment Website Design

An objectives based assessment approach was taken where each CSN site was evaluated and assigned points for meeting the primary objectives. A list of “low-value” sites was developed and further analysis was conducted to determine if the site should continue to receive laboratory analysis funding. Factors such as collocation with other networks, sites of known importance to health effects researchers, collocation with daily FRMs or continuous monitors, PM2.5 design value, population, proximity to other speciation monitoring sites, county emissions, trends in concentrations, model bias/error, and correlation were taken into considering before recommendations were made regarding funding.

The Contractor has designed a draft website (not yet publically available) that contains most of the technical information that supported the analysis that was conducted by EPA to determine funding recommendations, including the scoring, decision matrices, spatial maps, etc. The information shall be made available through Battelle’s QA web site <https://www.sdass.battelle.org/CSNAssessment/> for the EPA under contract EP-D-13-005.

Information related to other money saving options considered through the assessment, such as reduction in sample frequency, reduction in blank frequency, discontinuation of the CSN PM2.5 mass measurement, and efficiencies in shipping through reduction in the number of ice packs, is provided on the website. Information is also included that gives background information about the network, the assessment process, and the timeline for network changes. When the website is publically available, the website shall be interactive and organized in a manner to allow users to easily access all of the supportive technical information related to the assessment of each site.

With additional funding, the Contractor shall remodel the CSN Assessment website to improve the layout and design in order to provide a better user experience. The layout shall be slightly modified to provide a left-hand side navigation bar, a more consistent look throughout and an improved layout for viewing data for a particular site. Additionally, new ways of the filtering and searching for site information shall be

added. This would include filtering sites by state, filtering the map with site type categories and searching all site information. In addition, the question and answer (Q&A) document needs to be added to the website.

TASK 3 – CSN Assessment Website Maintenance

Once the CSN assessment website is accessible by the public, it is anticipated that a few changes or updates to the website will be needed. The contractor shall provide updates to the website to correct any errors and provide any updates as needed.

IV. DELIVERABLES

| Task | Deliverables | Due Date |
|-------------|---|---|
| 1 | Revised Cost Estimate and Delivery Schedule | In accordance with the terms of the contract. |
| 2 | CSN Interactive Assessment Website | June 1, 2015 |
| 3 | CSN Website Maintenance | Ongoing through December 2015 |

[END]

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| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> </div> <div> United States Environmental Protection Agency Washington, DC 20460 </div> </div> <div style="text-align: center; margin-top: 10px;"> <h2 style="margin: 0;">Work Assignment</h2> </div> | | Work Assignment Number <div style="border: 1px solid black; padding: 2px;">3-02</div> <div style="margin-top: 5px;"> <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: </div> | | | | | | | | |
| Contract Number <div style="border: 1px solid black; padding: 2px;">EP-D-13-005</div> | Contract Period 01/01/2013 To 12/31/2017 <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Base Option Period Number 2 </div> | Title of Work Assignment/SF Site Name <div style="border: 1px solid black; padding: 2px;">AA-PGVP Database Maint.</div> | | | | | | | | |
| Contractor <div style="border: 1px solid black; padding: 2px;">BATTELLE MEMORIAL INSTITUTE</div> | | Specify Section and paragraph of Contract SOW <div style="border: 1px solid black; padding: 2px;">Tasks 1 & 12</div> | | | | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | Period of Performance From 01/06/2015 To 12/31/2015 | | | | | | | | |
| Comments: Title: AA-PGVP Database Maintenance. This is a continuation of Work Assignment 2-02. This WA includes 50 hours to prepare the work plan and begin work. See Task 1 for work plan requirements. To the best of our knowledge, this work does not duplicate any work previously performed, or currently being performed by this office. | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <input type="checkbox"/> Superfund <div style="flex-grow: 1; text-align: center;">Accounting and Appropriations Data</div> <input checked="" type="checkbox"/> Non-Superfund </div> | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 15%;"> SFO (Max 2) <input type="checkbox"/> </div> <div style="flex-grow: 1; text-align: center;"> Note: To report additional accounting and appropriations data use EPA Form 1900-69A. </div> </div> | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
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| Work Assignment Manager Name Solomon Ricks | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number 919-541-5242 | | | |
| | | | | | | | FAX Number: | | | |
| Project Officer Name Jeff Curry | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number: 919-541-4018 | | | |
| | | | | | | | FAX Number: 919-541-4267 | | | |
| Other Agency Official Name | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number: | | | |
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| Contracting Official Name Antonio L. Leathers | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number: 919-541-2312 | | | |
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STATEMENT OF WORK

I. TITLE: AA-PGVP Database Maintenance

II. PROJECT BACKGROUND

The Office of Air Quality Planning and Standards (OAQPS), Ambient Air Quality Monitoring Program (AAMG) Quality Assurance (QA) requirements (40 CFR Part 58, Appendix A) states:

"2. 6 Gaseous and Flow Rate Audit Standards. Gaseous pollutant concentration standards (permeation devices or cylinders of compressed gas) used to obtain test concentrations for CO, SO₂, NO, and NO₂ must be traceable to either a National Institute of Standards and Technology (NIST) Traceable Reference Material (NTRM), NIST Standard Reference Materials (SRM) and Netherlands Measurement Institute (NMI) Primary Reference Materials (valid as covered by Joint Declaration of Equivalence) or a NIST-certified Gas Manufacturer's Internal Standard (GMIS), certified in accordance with one of the procedures given in reference 4 of this appendix. Vendors advertising certification with the procedures provided in reference 4 of this appendix and distributing gases as "EPA Protocol Gas" must participate in the EPA Protocol Gas Verification Program or not use "EPA" in any form of advertising."

This requirement gives assurance to end users that all specialty gas producers selling EPA Protocol Gases are participants in a program that provides an independent assessment of the accuracy of their gases' certified concentrations.

In 2010, the AAMG and Regions 2 and 7 initiated the implementation of the Ambient Air Protocol Gas Verification Program (AA-PGVP). Verifications started in June 2010.

In 2011, RTI under Contract EP-D-08-047 assisted the AA-PGVP by developing the AA-PGVP survey and housing it on the RTI website where monitoring organizations can access and complete the survey. This WA will ensure continued support, maintenance and enhancement of the survey.

III. STATEMENT OF WORK

TASK 1 – Revised Cost Estimate and Delivery Schedule

This work assignment is a follow-on to WA 2-02. A new work plan is not required. The contractor shall submit a revised cost estimate, broken out by task and subtask, and a revised delivery schedule in accordance with the terms of the contract.

Task 2 – Maintain and Enhance the AA-PGVP Survey to Provide for Website Submission

In a previous WA, a web-based survey was developed that provided information on what gas manufacturing production facilities are used by PQAOs; and it also informed EPA of PQAOs that wished to participate in the program. For this task, the Contractor shall:

- Meet with EPA to discuss the operation of the website, and explore any enhancements needed for 2015,
- Review current website access guidance with EPA and revise if necessary,
- Maintain the current survey on the website,
- Assist individuals gain access to the website when access problems occur,
- Review the possibility of a "Help" button that includes common issues (like correct email address), and also goes to an email address where the person can send an email of their problem,
- Ensure that PQAOs have updated the form each year by having certain required fields left unfilled (database starts "new" in November of each year) until the POC submits this information,
- Send bi-weekly reminder messages out to those organizations not completing the survey. For FY2015, we will include one EPA Regional Point of Contact to any reminder list that has a delinquent monitoring organization in a particular Region,
- Enhance the survey to allow one regional point of contact to fill in a survey for a delinquent monitoring organization,
- Provide a "same as last year" field that would allow the POC to just click on this if the information is the same as the previous year, and
- Provide two Excel reports every month: 1) the monitoring organizations that have filled out the survey and 2) a listing of delinquent monitoring organizations.

IV. DELIVERABLES

TABLE I. List of Deliverable and Due Dates

| Task | Deliverables | Due Date |
|------|---|---|
| I | Revised Cost Estimate and Delivery Schedule | In accordance with the terms of the contract. |
| 2 | Participant Survey Maintenance | 9 months ongoing activities |
| 3 | Reports | 2 months from WA approval |

V. REPORTING REQUIREMENTS

The reporting requirements shall be in accordance with the terms and conditions in the contract.

[END]

Contract Number: EP-D-13-005
Contractor: Battelle Memorial Institute
Work Assignment Number: 3-03
Work Assignment Manager: David Shelow

STATEMENT OF WORK

- I. TITLE:** "Optimization of Carbonyls Measurements and NATTS Technical Assistance Document (TAD)"

II. PURPOSE

The purpose of this Task Order (TO) is to assist the EPA's Office of Air Quality Planning and Standards (OAQPS), Ambient Air Monitoring Group (AAMG) with support of the National Air Toxics Trends Stations (NATTS) program and the Ozone precursors Photochemical Air Monitoring Stations (PAMS) programs. This TO will result in more reliable measurements of carbonyls such as formaldehyde, acetaldehyde, propionaldehyde, and butylaldehyde. This TO will also provide updated guidance on all air toxics measurements within the NATTS Technical Assistance Document.

III. BACKGROUND

There are 189 hazardous air pollutants (HAPs), or air toxics, regulated under the Clean Air Act (CAA) that have been associated with a wide variety of adverse human health and ecological effects, including cancer, neurological effects, reproductive effects and developmental effects. EPA's OAQPS National Air Monitoring programs, NATTS and PAMS measure the air toxics levels in the environment. As part of the PAMS program, State and local monitoring agencies measure ozone precursors and various meteorological parameters important to ozone formation. Carbonyls have been identified as important ozone precursors. Recently, EPA's Air Toxics Risk Assessment Group has determined that formaldehyde, a carbonyl compound, is the highest risk for cancer causing pollutant in our environment. While these programs are managed by EPA, State and local air monitoring agencies perform daily measurements of carbonyls following EPA's Toxic Organic Method TO-11A for measurement of carbonyls. Many of the monitoring agencies have expressed their concern about method uncertainty issues that affect the reliability of their measurements. In 2006 the EPA amended the PAMS monitoring requirements to remove the requirement to measure carbonyls in most PAMS areas due to the method uncertainties. The current PAMS program redesign plans include the reinstatement of the carbonyls measurement requirement contingent on improvements to the method. The National Association of Clean Air Agencies, NACAA, has asked EPA AAMG to provide guidance that optimizes the current EPA methodology to minimize uncertainties within the method to help State and local monitoring agencies provide more

accurate carbonyl measurements.

The NATTS technical assistance document is guidance followed by every lab that supports the NATTS air toxics monitoring agencies. The latest revision of the TAD is dated 2009. The technical advances in analytical equipment it is time to update the TAD.

The Contractor may be required to participate in conference calls and/or attend meetings in EPA RTP, NC, facilities or at off-site locations in the RTP, NC metropolitan area.

IV. STATEMENT OF WORK

TASK 1 – Revised Cost Estimate and Delivery Schedule

This work assignment is a follow-on to WA 2-06. A new work plan is not required. The contractor shall submit a revised cost estimate, broken out by task and subtask, and a revised delivery schedule in accordance with the terms of the contract.

TASK 2 – Study Toxic Organic Method TO-11a Uncertainties and Develop Method Optimization for TO-11a to Minimize Uncertainties.

The contractor shall design and conduct special study to evaluate the uncertainties of EPA TO-11A method. Experiments shall include determining the effects of high humidity, high ozone and high NO_x levels on the standard carbonyl sampling equipment that incorporates a KI scrubber and DNPH cartridges and HPLC-UV detection analytical system. The contractor shall also evaluate and determine the optimal sampling flow rate and optimal HPLC analytical profile for the current method. The contractor shall develop a test matrix incorporated in a Quality Management Plan. The goal of this task is to develop updated TO-11A guidance to minimize method uncertainties for State and Local air monitoring agencies.

TASK 3 – Feasibility Study of a Continuous Direct Reading Measurement of Formaldehyde, Acetaldehyde and Acrolein using a Submillimeter Wave Spectroscopic Sensor.

The contractor shall design and conduct a feasibility study of using the submillimeter wave spectrometer for continuous direct (near real time) measuring ambient levels of formaldehyde, acetaldehyde, and acrolein at sub ppb levels. The contractor shall challenge the instrument using laboratory standards containing various carbonyls under increasingly challenging environmental conditions (similar to task 2). The contractor shall also recommend different concentrating techniques that would allow the instrument to reach desired detection limits. The contractor shall determine MDL's of the instrument for these pollutants listed.

TASK 4 – NATTS Technical Assistance Document Guidance

Contractor shall assist EPA in updating the NATTS technical assistance guidance document, TAD, to ensure proper QA/QC perspectives are included and the latest technological advances are address. The contractor shall provide a written draft of the updated TAD. This includes meeting with EPA to discuss input from State and Local air monitoring agencies lab support personnel and provide ongoing technical support.

V. DELIVERABLES

| Task | Deliverables | Due Date |
|-------------|---|---|
| 1 | Revised Cost Estimate and Delivery Schedule | In accordance with the terms of the contract. |
| | | |
| 2 | Final Report & Method guidance | June 1, 2015 |
| | | |
| 3 | Final Report & Method guidance | March 1, 2015 |
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| 4 | Final report and recommendations | July 1, 2015 |

[END]

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| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> </div> <div> United States Environmental Protection Agency Washington, DC 20460 </div> </div> <div style="text-align: center; margin-top: 10px;"> <h2 style="margin: 0;">Work Assignment</h2> </div> | | Work Assignment Number <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">3-04</div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: </div> | | | | | | | | |
| Contract Number <div style="border: 1px solid black; padding: 2px;">EP-D-13-005</div> | | Contract Period 01/01/2013 To 12/31/2017 <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Base Option Period Number 2 </div> | | | | | | | | |
| Contractor <div style="border: 1px solid black; padding: 2px;">BATTELLE MEMORIAL INSTITUTE</div> | | Title of Work Assignment/SF Site Name <div style="border: 1px solid black; padding: 2px;">Support Monitoring QA Programs</div> | | | | | | | | |
| Purpose: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Work Plan Approval </div> <div> <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Incremental Funding </div> </div> | | Period of Performance <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">From 01/30/2015 To 12/31/2015</div> | | | | | | | | |
| Comments: Title: Technical Support for the National Monitoring Networks Quality Assurance Program. This WA includes 400 hours to prepare the work plan and begin work. To the best of our knowledge, this work does not duplicate any work previously performed, or currently being performed by this office. | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <input type="checkbox"/> Superfund <div style="flex-grow: 1;">Accounting and Appropriations Data</div> <input checked="" type="checkbox"/> Non-Superfund </div> | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 15%;"> SFO (Max 2) <div style="border: 1px solid black; width: 30px; height: 20px; margin-top: 5px;"></div> </div> <div style="flex-grow: 1; text-align: center;"> Note: To report additional accounting and appropriations data use EPA Form 1900-69A. </div> </div> | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
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| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | | | Cost/Fee: | | | LOE: | | | |
| Cumulative Approved: | | | | Cost/Fee: | | | LOE: | | | |
| Work Assignment Manager Name Dennis Crumpler | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number 919-541-0871 | | | |
| | | | | | | | FAX Number: | | | |
| Project Officer Name Jeff Curry | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number: 919-541-4018 | | | |
| | | | | | | | FAX Number: 919-541-4267 | | | |
| Other Agency Official Name | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number: | | | |
| | | | | | | | FAX Number: | | | |
| Contracting Official Name Antonio L. Leathers | | | | | | | Branch/Mail Code: | | | |
| <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; font-size: small;"> (Signature) (Date) </div> | | | | | | | Phone Number: 919-541-2312 | | | |
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Statement of Work

I. TITLE: Technical Support for the National Monitoring Networks Quality Assurance Programs

II. Project Background

This is a work assignment to support the Environmental Protection Agency's implementation of ongoing quality assurance programs in fulfillment of 40 CFR Part 58, Appendix A.

On July 18, 1997, the U.S.EPA promulgated the new national Ambient Air Quality Standards (NAAQS) for particulate matter (PM). The regulations, including monitoring methods for determining compliance with the NAAQS, are detailed in 40 CFR Parts 50, 53, and 58. The regulations were revised on October 17, 2006 and more recently on December 14, 2012. The NAAQS apply to the mass concentration of particles with aerodynamic diameters lower than 2.5 μm (PM_{2.5}). The NAAQS currently specify:

- ◆ The twenty-four hour average PM_{2.5} is not to exceed 35 $\mu\text{g}/\text{m}^3$ for a three year average of annual 98th percentiles at any population-oriented monitoring site in a Metropolitan Planning Area (MPA).
- ◆ Three year annual average PM_{2.5} was sustained. It is not to exceed a concentration of 12 $\mu\text{g}/\text{m}^3$ or more from a single community-oriented monitoring site or the spatial average of eligible community exposure sites in a MPA.

The PM_{2.5} mass monitoring network is a critical component in the national implementation of the PM_{2.5} NAAQS. It currently consists of approximately 1000 monitoring sites that use instruments and protocol specified by the regulations as the Federal Reference Method (FRM), Federal Equivalent Methods (FEMs) or Approved Regional methods (ARMs) for PM_{2.5} mass. The ambient data from this network drives an array of regulatory decisions, ranging from designating areas as attainment or nonattainment, to developing cost-effective control programs and tracking the progress of such programs.

The FRM network is complemented by the PM_{2.5} Chemical Speciation Network (CSN) which generates both aerosol mass measurements and chemically-resolved or speciated data. Chemically-resolved data serve the implementation needs associated with developing emission mitigation approaches to reduce ambient aerosol levels. These needs include emission inventory and air quality model evaluation, health effects source attribution analysis, and tracking the success of emission control programs. These resolved chemical measurements also provide support for regional haze assessments and development of implementation plans aimed at improving visibility.

In addition to the NAAQS, the October 17, 2006 rulemaking (see 71 FR 61236), EPA promulgated numerous revisions of the ambient monitoring regulations. The previous designation of national ambient air monitoring sites (NAMS) was suspended and most of those sites were to be incorporated into a network termed as "NCORE". NCORE sites will be multi-pollutant sites that employ filter-based PM_{2.5} FRM and speciation sampling and analyses along with other continuous monitoring protocols including new generation trace gas measurements for CO, SO₂, and NO_y (i.e., reactive oxides of nitrogen) to be used in predictive atmospheric pollution models. Almost all of the speciation trends sites at the old NAMS will continue their roles and the NCORE sites that are newly deployed or evolve from other PM_{2.5} SLAMS will also assume the role for measuring trends of ambient pollutant concentrations. A number of the preexisting SLAMS will continue hosting one to several monitoring protocols that target specific pollutants or pollutant classes. Speciation sampling at these sites will continue to support State Implementation Plan (SIP) strategies and health studies.

On November 12, 2008 EPA substantially strengthened the national ambient air quality standards (NAAQS) for lead (see 73 FR 66964). EPA revised the level of the primary (health-based) standard from 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 0.15 $\mu\text{g}/\text{m}^3$, measured as total suspended particulate (TSP) and revised the secondary (welfare-based) standard to be identical in all respects to the primary standard. In conjunction with strengthening the lead (Pb) NAAQS, the EPA promulgated new monitoring requirements, which included updated QA requirements in 40 CFR part 58 Appendix A. The monitoring rules were further revised in late 2010 to specify the requirements for low-volume PM-10 Pb sampling at some NCore sites, and for background Pb levels, which would indicate whether or not the area would be required to perform high volume TSP sampling.

This WA will support Quality Assurance programs for the PM_{2.5} FRM Network, the Pb network, and related monitoring in the NCore network, including continuous PM_{2.5} methods that are designated as "Federally Equivalent" or "Approved Regional Methods" (FEMs and ARMs). Beginning in 2009 Special Purpose PM_{2.5} Monitors (SPMs) were required to meet QA criteria set out in 40 CFR Part 58 appendix A; therefore, they are also covered under the PEP.

The key functions of quality assurance supported by this work assignment is the characterization, quantification and publication of uncertainty in existing ambient PM_{2.5} and PM_{10-2.5}, and Pb measurements. The resulting data helps Federal, State, local and Tribal air pollution control agencies understand the risks of their regulatory and policy decisions regarding these pollutants. The ambient Monitoring Regulations at 40 CFR Part 58, Appendix A, section 1.2 (section 3.5 in the 1977 promulgation) provide the pertinent provisions for evaluating the uncertainty of the PM_{2.5} monitoring methods. It states,

"...all ambient monitoring methods or analyzers used in SLAMS shall be tested periodically, as described in this section, to quantitatively assess the quality of the SLAMS data. Measurement uncertainty is estimated for both automated and manual methods. ...

(a) Precision: A measurement of mutual agreement among individual measurements of the same parameter or characteristic under the same conditions. If multiple measurements are made with the same instrument the precision can be expressed generally in terms of the standard deviation from the mean of the measured values. If the parameter or characteristic can only be measured at

a unique time and place, e.g., average ambient pollutant concentration over 24 hours, the precision must be carried out by replicate instruments. The precision of the instrument and the procedure for the measurement is characterized by the coefficient of variation exhibited over several measurements taken by two or more ostensibly identical instruments using the same procedures and time periods.

(b) Accuracy: The degree of agreement between an observed value and an accepted reference value, accuracy includes a combination of random error (precision) and systematic error (bias) components which are due to sampling and analytical operations;

(c) Bias: The systematic or persistent distortion of a measurement process which causes errors in one direction. The individual results of these tests for each method or analyzer shall be reported to EPA as specified in section 4 of 40 CFR Part 58, appendix A. EPA will then calculate quarterly assessments of measurement uncertainty applicable to the SLAMS data as described in section 5 Appendix A. Data assessment results should be reported to EPA only for methods and analyzers approved for use in SLAMS monitoring under Appendix C of part 58.

PM_{2.5} QA Activities

Precision for the PM_{2.5} FRM/FEM network, as specified in 40 CFR Part 58 Appendix A as of October 17, 2006, is determined by collocating a replicate sampler at 15% of the existing sites and taking a sample at least once every 4th FRM sampling event, (every 12 days). An average coefficient of variation between like samplers is calculated for each sampler type and for the network for each year. Precision for the CSN is determined by collocated sampling at 6 sites STN/NCore sites established in the early design of the STN.

The PM_{2.5}, Performance Evaluation Program (PEP)

The PM_{2.5} PEP measures bias of the FRM/FEM networks. The procedure is to collocate a portable FRM audit sampler with a State, Local or Tribal (SLT) FRM sampler at an established routine air monitoring site, collect a 24-hour sample with each sampler, and then store the resultant concentration data from the audit sampler in the Air Quality System (AQS) data base. The network bias is calculated from data from the PEP sampler that is compared with the routine sampler data derived on the same sampling date. Under the 2006 revised regulations, PM_{2.5}-PEP collocated sampling was reduced from 25% down to 15% of the network each year beginning in 2007. The rule changes also called for consolidating the current FRM Reporting organizations in each State, independent local agency or Tribal Agency into Primary Quality Assurance Organizations (PQAO) for the purpose of conducting a less costly PEP program. Primary quality assurance organizations with 5 or less PM_{2.5} monitoring sites would be required to have at least 5 valid audits per year ideally distributed across 4 calendar quarters; primary quality assurance organizations with greater than 5 sites would be required to have 8 valid audits per year distributed across the 4 quarters. (All sampling method designations should be covered in a given year.)

The gravimetric analytical support work is performed by a contractor supported laboratory located at EPA Region 4 Science & Ecosystems Support Division in Athens Georgia. The PM_{2.5} PEP Lab performs the following functions:

1. Lot testing of filters
2. Initial equilibration and taring virgin filters,
3. Initiating the Chain of Custody (COC) Form
4. Equilibrating and post weighing exposed filters and blanks.
5. Completing the COC forms
6. Entering the gravimetric results and associated meta data from Field data sheets into the PEP Data Base
7. Completing the data verification and levels 0 and 1 validations and posting results for the Regional and participating SLT Field scientists to complete level 2 validations, and
8. Troubleshooting with the Technical Support Contractor, the Regional and SLT field scientists and the AQS staff to ascertain why certain data points are rejected by AQS when an upload is attempted. The technical support contractor deals with the data base functionality and program coding issues.

In the October 17, 2006 revisions to the monitoring regulations, a number of continuous PM_{2.5} samplers were accepted as candidates for Federal Equivalent Method or Approved Regional Method determinations under 40 CFR part 53. Each make and model must be approved by the Office of Research and Development before it can be deployed. As these samplers are approved and deployed for the purpose of measuring air concentrations for design values, they are subject to QA requirements in 40 CFR parts 50, 53, & 58. The PEP in each region include in their sampling plan a sampling event at one of each FEM sampler type utilized in each PQAQO.

In 2013 Battelle, under a previous work assignment, transferred to their internet domain from RTI International, a web interface and a data base to support the Pb PEP, and OAQPS's ambient monitoring protocol gas verification program. The portal was modified in 2014 to create a place to hold a static version of the PM_{2.5} data base (the PED). Maintenance of this web portal and the associated data bases, and associated technical support to the monitoring community are a key function of this work assignment. As of August 2014 the data and functionality of this web portal with respect to PM_{2.5}, PM_{10-2.5}, and Pb were transferred into Battelle's internet domain, noting a few transition issues needing to be resolved. Battelle has worked with the EPA AQS staff to generate a template for extracting PEP data and posting it successfully to AQS for bias reports generated by AQS. A goal for 2015 is to empower the PEP lab support contractor in EPA Region 4 to upload PM_{2.5} and PM_{10-2.5} PEP data into AQS. As part of this effort each EPA Regional PEP lead will be empowered to review their PEP data in the PED and provide the validation of the field data that is needed to make final approval of the data.

PMcoarse (PM₁₀ - 2.5) PEP

PEP sampling events for PM_{10-2.5} began at a few sites in 2011; but officially launched in 2012. The majority of FRM and FEM PM_{10-2.5} monitoring occurs at NCORE sites. A value of PM_{10-2.5} is derived from the difference between the PM_{2.5} and PM-10 concentrations, both measured (including the gravimetric analysis) over the same time period. The PEP sampling will entail collocating a PM-10 version of BGI PQ200, along with a PM_{2.5} version (that would ordinarily be placed there for a PM_{2.5} event) at the site; collecting 24-hour filter samples and taking the difference in filtrate masses on the two filters.

The 40 CFR part 58 Appendix A states that one performance evaluation audit must be performed at one (PM_{10-2.5}) site in each primary quality assurance organization each year. In 2012, as a cost reduction measure, the EPA decided to treat the NCore Network as one PQAQO with respect to PM_{10-2.5}. This would have produced 8 sampling events per year. Consequently, the requirement to subject 15% of the PQAQO network in each region was invoked in order to generate enough data points over 3 years to provide some confidence in the bias values that would be derived. As a result 2 audits were to be conducted in 50% of the Regions and one audit conducted in the other 50%. In August 2014, EPA proposed to vacate the requirement to monitor PM_{10-2.5} at NCore sites. It is possible that 2015 may be the last year in which a full-scale PEP is performed on the PM_{10-2.5} network.

The PM_{10-2.5} PEP sampling events were begun under the guiding constraints of the PM_{2.5} QAPP and SOPs since the only difference is essentially the removal of the PM_{2.5} separator in the FRM sampler for PM-10. Necessary modifications have been made to the SOP for field operations, but the data code conventions of the AQS has been found to be not compatible with way the data within the PED is extracted, resulting in rejection of the PEP data by AQS. The resolution of these issues lies in part with the reconstruction of the PED for the web portal. As these procedures for managing the data in the new data base evolve the revisions for PM_{10-2.5} will be integrated into the combined PM_{2.5} and PM_{10-2.5} PEP Lab SOP and PEP QAPP.

The (Lead) Pb-PEP

The EPA in 2008 promulgated revised monitoring regulations for determining ambient lead (Pb) concentrations. The initial monitoring phase of the Pb monitoring network deployed high volume samplers for collecting TSP, from which lead concentrations will be determined through standard FRM/FEM extraction and atomic absorption or inductively coupled plasma mass spectrometry. A few NCore and other sites began low-volume PM-10 sampling in 2011 for Pb, but the majority of the low volume PM-10 Pb began in 2012. . A significant number of sites were able avoid PM-10 Pb sampling altogether with preliminary measurements and modeling that demonstrated ambient concentrations cannot exceed 50% of the NAAQS at those locations. A total of 21 NCore sites ended up with low volume PM-10 Pb samplers. And probably less than 10 non-NCore sites low-volume PM-10 Pb samplers have been deployed in the US.

The performance evaluation program (PEP) for high volume Pb monitoring was implemented fully in 2011. EPA Contractors and independent SLT auditors collected PEP filter samples on high volume samplers. However the PEP for the Pb network also involves SLTs generating PEP filters with their own collocated samplers on days not scheduled for precision measurements and sending those to the PEP service laboratory. EPA's service laboratory for the Pb-PEP is located at the EPA Region 9 environmental measurement services laboratory in Richmond California.

The sampling frequency and SLT's roles in the Pb PEP is a little more complex than PM_{2.5}. It requires direct participation by SLT collocated sampling sites in addition to the independent collection of PEP samples as follows:

- ◆ PQAOs with ≤ 5 sites require 5 PEP measurements. One is performed by an ESAT contractor for the EPA, or a STL auditor who is conducting the sampling event with a completely independent sampler like those used by the EPA. This is called the EPA (or independent STL) Pb-PEP sampling event. In addition to the Pb-PEP event, four collocated samples are taken from STL precision sites from a STL-owned collocated sampler which is otherwise used only to generate samples for determining network precision. These samples are generated on national sampling days other than those used for precision measurements.
- ◆ PQAOs with > 5 sites require 8 audits, 2 EPA or independent STL Pb-PEP, and 6 collocated samples taken from STL precision sites.

If a SLTs network includes a site with a low-volume PM-10 sampler, that sampler falls into the population of high volume samplers that get 1 or two independent PEP audits per year, which means the low-volume PM-10 sampler might be selected for a PEP audit once every 6 years.

The low-volume PM-10 PEP sampling frequency for the NCore network was modified due to the fact that there are approximately 20 NCore sites that host a low-volume sampler. Consequently the 15% rule would result in only 3 audits per year across the US, which does not produce a statistically useful number of data points. We are therefore implementing a procedure to conduct one PEP audit at every site. There are 5 collocated sites and we have requiring all 5 sites to contribute 4 sample filters on non-precision sampling days. At this writing the expectation is that the Pb detection and quantification will occur by XRF.

A proposed rulemaking for the Pb NAAQS in 2014 would eliminate the general requirement for low-volume Pb sampling at an NCore sites. A very small number of NCORE sites and a few source oriented sites are anticipated to need background monitoring for Pb, which has caused EPA to rethink the long term strategy for PEP at low volume sites. Since there are so few of these in the networks, the strategy is to forgo PM-10 Pb audits unless a PQAO specifically wants one. EPA expects the final rulemaking on this pollutant in 2015 and it should take effect in 2016. The WAM will advise the contractor if the PM-10 PEP is suspended prior to January 2016.

Under this Work Assignment the contractor shall provide follow-on technical support for the PM_{2.5}; the PM_{10-2.5} and the Pb performance evaluation programs. The scope of activity will have 5 main foci:

- Reconstruction of the PM_{2.5}, PM_{10-2.5}, and Pb data base (PED)
 - adding new reports and features to expedite internal validation and then uploading of PEP measurement data to AQS
 - Create the reports and outputs that enable the EPA Regional PEP leads to monitor the key QA indicators of the PEP in their respective Regions, and
 - Enable OAQPS to monitor the National Program more efficiently
- Continue transferring results of the PEP measurements to AQS and simultaneously creating the digital tools to enable the EPA Regional PEP technical leads or their

contractors to load the PEP measurement result to AQS, at which time the contractor's role will morph to consulting and troubleshooting.

- Revising and editing Field and Lab SOPs and the Quality Assurance Project Plan as program procedures and analyses develop and evolve
- Compiling PEP results and internal QA/QC data into annual and three year reports.
- Provide support for training

III. Statement of Work

TASK 1: Work plan and Cost Estimate.

The Contractor shall meet with the Work Assignment Manager (WAM) to discuss the WA tasks and deliverables. This meeting can be via teleconference. The Contractor shall then prepare and submit a work plan and cost estimate for this WA.

Work Area I Reconstruction of the PM_{2.5} and PM_{10-2.5} data base (PED)

TASK 2: The contractor shall construct a data base using SQL data base programming that replicates the basic functionality of the current PED.

SQL was chosen as the platform in order to increase the capacity of the data base and utilize the PED in an internet web-based environment. The functionality of the current MS Access data base has been reviewed and analyzed in a previous work assignment. Perhaps due to its size and also the several updates of MS Access the current data base will frequently not perform correctly. For example, the most problematic of these behaviors appears to be an inability to permanently assign the final approval to valid data, in certain yet not understood circumstances, even though the authorized final approver has approved it. This prevents the current extraction algorithm from pulling the data out and loading it in the test input transaction template or the real input transaction format.

The Contractor shall develop an organizational chart for all programs and supporting activities and data management systems to plan re-engineering of PEP

A list of data fields that have been unpopulated or inactive for the last 3 years shall be identified for the WAM's approval to be eliminated in the new data base design. Outputs or Dbase generated reports that were identified in the review as being ineffective or unused shall also be put on the list for exclusion from the new data base.

The contractor shall devise electronic chain of custody (COC) and field data sheet forms that will be populated essentially in the web-based environment. The COC will continue to be initiated by the Region 4 Gravimetric Lab, so a web interface will need to be established to populate the COC.

The field data sheet (FDS) is completed by the Regional ESAT and SLT PEP field scientists. The contractor shall develop an Android based app for direct uploading the field data to the FDS within the data based using telemetry. The data base shall draw upon this data to perform the calculation of the measured pollutant concentration and it shall perform the validation steps that are tied to this data. This last process will not be very different than the current functionality. This app development and deployment shall be first piloted in two EPA Regions for the Pb-PEP as a proof of concept.

The Contractor shall identify technical inefficiencies with the transfer protocol and validation/approval procedures that can be resolved with program code modifications. The contractor shall work with the Region 4 Laboratory, the Region 9 laboratory, the XRF laboratory and the OAQPS PM_{2.5}/PM_{10-2.5} and Pb PEP leads to optimize storing and processing of validated PEP data, and then loading PEP results to the Air Quality System (AQS).

The contractor shall also incorporate into the validation procedure new additional checks that are routinely performed by AQS to qualify data as legitimate for posting. As an example, by identifying a monitoring site with a street address the data base should be able to pull AQS ID numbers for that site. The AQS ID numbers that are assigned to the site street addresses will be pulled from AQS on a quarterly basis to update the static field in the PED. This includes further integration of a table on field data verification and optimizing validation based upon a scoring system identified in the respective PEP QAPP. The EPA regional contacts will determine any other checks to be included in concert with OAQPS AAMG and the AQS staff.

Make revisions as necessary to provide real-time access to the data by Regional PEP ESAT contractors and SLT QA personnel. This shall include the data entry level by field operators and review and approval level for EPA Regional PEP leads and the designated QA leads for participating SLT agencies. The attached document were technical support to resolve issues regarding access, data entry to COC/FDS forms, data review and correction, data storage, data transfer, and data integration related to the PM_{2.5} and PM_{10-2.5} PEP Performance Evaluation Databases (PED), the QA website and associated Pb-PEP database.

Pb-PEP

Transfer the results of the ICPMS analysis performed by the EPA Region 9 support lab and the XRF analysis of 47 mm PM-10 Pb filters and accompanying QC data by the assigned support laboratory to the data base on the QA web site.

The Transfer of analytical results via; EDDS's for the ICPMS and XRF laboratories was established in previous work assignments. Each lab provides data in a prescribed spreadsheet format that enables the data to be subsequently loaded to the Pb-PEP data base (Pb-PED). The contractor shall periodically load the laboratory data into the Pb-PEP data base. The EPA regional staff or the ESAT contractor or the participating SLT auditors will validate the sampling results.

Work Area II: Loading Data into AQS

Task 3: The Contractor shall provide technical support for the posting of validated and approved PM_{2.5}-PEP, PM₁₀ – 2.5 PEP and Pb-PEP data in AQS.

PM_{2.5} PEP, PM₁₀ – 2.5 PEP

Background: The EPA Region 4 contractor provides the PM_{2.5}/PM_{10-2.5} lab validation “stamp” to the PM_{2.5}/PM_{10-2.5} Data base (PED) and will upload the current version of the PED to the QA website monthly. Each EPA Regional PEP lead reviews the results posted in the PEP and provide a validation/approval of the field data. The Region 4 WACOR or TOCOR essentially assures both validations have been performed and makes final approval. The EPA Region 4 reloads the data base with fully approved data to the current QA website. Historically the technical support contract would then extract the data using a data base report in a format that is directly up-loadable to AQS. The objective for this current calendar year is to provide this capacity to each EPA Regional PEP lead or their contractor, if assigned the responsibility. A significant challenge in the past arose when data would not pair with SLT routine sampling data in AQS. There are only a few reasons why PEP data does not pair up with intended SLT data, primarily related to incompatibility with critical AQS parameters and codes. AQS generates error codes when PEP data does not pair-up with SLT data, which helps indicate the issues with the data. This data will be separated from the test out-put and delivered to Battelle. The data that is indicated as acceptable will be uploaded to AQS.

Under this task the contractor for this work assignment shall

- a) Continue to work with the EPA AQS staff to fully understand the transaction upload template for the PEP data and the reasons for upload blockages.
- b) As experience teaches, identify improvements to the extraction algorithm for pulling the PEP data from the PED and loading it into the input transaction template. These improvements shall be proposed to and be approved by the WAM before implementing them under Task 2.
- c) The contractor shall compose for the WAM’s review and approval a short (1-2 pages) manual or “cheat sheet” for the EPA Regional PEP contact or contractor for loading PM_{2.5} and PM_{10-2.5} results into AQS.
- d) Identify and document any issue in the PED’s internal process code that leads to improper rejection of otherwise approved data, in which case it cannot be extracted.
- e) Troubleshoot the cause for “valid” PEP data being rejected by the upload transaction template and algorithm. Divide the rejected data into 2 categories:
 - i. Issues that can probably be tracked back to the PEP, i.e., the AQS ID numbers are not matched or PM_{2.5} or PM_{10-2.5} sampling does not exist at the sites for which PEP data was generated

- ii. Issues that are caused by incorrect meta data associated with the SLT's monitor or the site; or the way that a sampler was or was not operated, i.e., the sampler failed during the run or the SLT ran it on another day without notifying the PEP field scientist.
- f) Work with the AQS staff to devise a solution if it involves a revision to the PED or the PEP data extraction algorithm. Document and report the proposed solution to the WAM who will direct the contractor to implement the remedy under Task 2. If the remedy is believed to be in the purview of AQS, the contractor shall document and report the suggested remedy to the WAM, who will forward the recommendation to AQS.
- g) Queries may arise with the Region 4 and 9 service laboratories, contract laboratories, Regional ESAT and SLT PEP field auditors, and SLT Collocated Pb site operators. The Contractor shall be available to respond by telephone and/or electronic mail. Availability of the contractor to resolve technical problems with the PED shall be made in a timely manner due to the schedule for delivering data to AQS. The contractor shall provide an initial response by phone or E-mail within 2 days. Historically this effort has required an average of 2 hours per week per program.

Work Area III: Revising Field and Lab SOPs and the Quality Assurance Project Plan as program procedures and analyses develop and evolve

PM_{2.5} and PM_{10-2.5}

Task 4. The contractor shall provide draft language, for approval by the WAM, of revisions to PM_{2.5} Lab SOPs and the PED User manual to implement necessary changes in procedures to optimize the data storage and validation process. All the PM_{2.5} and PM_{10-2.5} SOPs and the QAPP are due for a major review and revision as necessary.

Task 5. The contractor shall participate in 5 conference calls conducted by the WAM to stimulate review and comment by the PEP workgroup. The Contractor shall record all the comments. The WAM will review the comments and provide direction on which ones should be either affirmatively responded to or disregarded. The revisions to the Implementation Guidance will be based on draft revisions to the Lab and Field SOPs, the QAPP, and draft language provided by the WAM. Current drafts of the existing documents were provided during the previous work assignment.

Pb-PEP

Task 6. At the direction of the WAM the Contractor shall complete draft revisions or technical review of the Pb-PEP Field SOP, the QAPP, and Implementation Guidance to be issued to SLT agencies that provide PEP samples from SLT-owned and operated collocated samplers.

Work Area IV: Compiling PEP results and internal QA/QC data into annual and three year reports

TASK 7: The Contractor shall finalize the 2012 annual the PM_{2.5} and PM_{10-2.5} PEP Report and the 2011-2013 three-year, report.

Under a previous work assignment, the contractor gained an understanding of the outputs of the PED that provide tables and plots of most of the key elements that should go into the annual and 3-year reports. The PM_{2.5} and PM_{10-2.5} PED templates of the data extractions were supplied to the Contractor for this work assignment. Additional templates and extractions will be created through Task 2. (The utility was envisioned to ultimately enable Regional PEP Contacts to view the available PEP data at any time from the QA website.)

The annual report shall consist of the following:

- Audit results from the PM_{2.5} and PM_{10-2.5} PEP vs FRM/FEM National Network Sampler events in spreadsheet form and plotted graph. Levels of aggregation shall be by National network, State and Region and subdivided by the PEP's PM separator; another analysis shall examine data by SLT's Sampler make/model subdivided by PM separator-WINS impactor or very sharp cut cyclone. PEP Results Data shall be represented as: Scatter-plots of SLT Routine Sampler vs PEP Sampler
- Plots of Percent relative difference between the PEP samplers' measurements of concentration vs the FRM/FEM sampler's measurement of concentration over the period of the report-year to year from 2011-2013, and 2014, then combined with the historical data since 2005. (The period from 2006-2008 experienced a noticeable downward trend in bias network wide.)
- All data in the circumstance when either the PEP or the SLT's derived concentration is less than 6 μ /m³ shall be aggregated; the difference, CSLT – CPEP, shall be plotted against concentration as measured by the PEP sampler. The contractor shall devise an advisory limit for difference in concentrations when either of the values is less than 6 μ /m³. The contractor shall propose the metric, e.g., a 2-sigma analysis, and outcome for review by the WAM and the PEP work group.
- If a PEP sampling event has been conducted where a SLT FEM sampler is collocated with an FRM, the difference or relative percent difference with respect to both FEM and FRM should be determined and plotted on the same graph. Because AQS at this time will only pair the PEP data with the SLT's primary sampler data, this will require mining some of the FEM data or the FRM data from raw data in AQS, depending on which one the SLT has designated as the non-primary sampler. For those events where the difference is outside the DQO or the 2-sigma advisory limit for concentrations less than 6 μ /m³, the site will be identified by location and reported directly to the Regional PEP lead. The WAM will provide a list of SLT contacts so the bias advisories can be forwarded.

- Results of Semi-Annual QC tests and verifications, e.g. internal audits, conducted by the supporting gravimetric laboratory and the field scientists.
- See also the data types that are common to both PM_{2.5} and PM_{10-2.5} PEP and Pb-PEP, which is identified in Task 9.

Task 8. The contractor shall prepare a draft Low- and High-Volume Pb-PEP a three year report for 2010-2012.

Background: Several factors influence the way data is aggregated and present for Pb-PEP.

- The national ambient Pb network is much smaller than the PM_{2.5} network; therefore the total number of PEP data points is smaller on an annual basis and a cumulative basis.
- With respect to the new NAAQS, the network and the PEP are quite young
- There are two types of bias data. One generated by truly independent PEP auditors and the other generated from samples pulled from network collocated samplers. In this latter case the sampler is probably operated by routine site operator, who also collects the PEP sample and ships it to the analytical support laboratory.
- The level of the NAAQS, and in most locations the ambient levels of Pb, are fractions of a microgram per cubic meter as compared to micrograms for PM_{2.5}. This can potentially lead to wide scatter and artificially inflated bias. One countermeasure is that the high volume samplers collect larger mass loadings so that precision on a given high-volume filter is better. There has been too little data generated thus far with respect to the low-volume data to ascertain the typical concentrations and what we might anticipate in terms of the effect on bias.

1. The PEP results data shall therefore be represented as
 - Scatter-plots of SLT Routine Sampler vs combined PEP Sampler and SLT collocated samplers that provided a sample to PEP.
 - Separate scatter plots of SLT Routine Sampler vs PEP Sampler, and SLT Routine Sampler vs SLT collocated samplers that provided a sample to PEP.
 - Percent relative difference between the PEP samplers' measurements of concentration vs the FRM/FEM sampler's measurement of concentration over the period of the year 2012 and then combined with the historical data since 2010. The WAM and the PEP Workgroup will review the data to ascertain whether the current ambient Pb concentration cut-off specified in 40 CFR part 58 appendix A will allow a sufficient number of the data points to be included in the bias statistic.
 - Annual and quarterly completeness by Region and by Primary Quality Assurance Organization (PQAO) based on number of legitimate data pairs (network-PEP) vs the number of audits that were supposed to have been conducted according to the number of sites in the target networks and actual number of audits conducted. These findings will also include:
 - PEP data points are not matched with SLT results by date, and any stated reason why the SLT sampler data does not exist for that date
 - Dates where the ambient concentration determined by either SLT or PEP sampler is $\leq .02 \mu\text{g}/\text{m}^3$, (which renders the pair invalid for the purposes of determining network bias), or

- If a PEP sample cannot be paired with an SLT sample for any other reason, the reason for invalidation shall also be identified and recorded.
- Identification of PEP audits that were conducted on samplers that were not part of the national PM_{2.5} SLAMS network but were special purpose monitors or Tribal monitors. If these samplers were listed as non-regulatory in AQS their data shall not be counted in the QA Bias statistics for the SLAMS network, but shall be identified and included in the QA/QC reports for the PEP.

Task 9: Programmatic Data Applicable to both PM_{2.5/10-2.5}, and low-and high-volume Pb PEP

1. Parking lot study precision results by which specific PEP samplers in the national fleet that appear to generate abnormal results, shall be identified. The data shall be presented for
 - The national program and for each Region with and without SLTs that have assumed field operations and/or lab operations; and also by each SLT
 - The "parking lot" data shall be made available for retrieval by the WAM and the Regional PEP contacts on an ongoing basis
 - Follow-up actions from parking lot collocation studies in each Region, or National and Regional collocation studies.
2. Annual reviews of records and audits of field and analytical personnel and their respective activities in the PEP. These include reviews and audits of SLT implemented programs. The Regional PEP contacts are supposed to conduct one of these every year.
 - Note that for PM_{2.5} and PM_{10-2.5} and low-volume Pb, the evaluation of field scientists, training, semi-annual parking lot events and conference calls will be coincident.
3. Other Elements, activities and data that should be included in the detailed QA/QC report
 - Significant events that occur at the Regional level such as natural disasters, accidents, terrorism, or other catastrophes that affect the operation of the PEP; or National or international events, e.g., Olympics or War
 - Attendance records, session notes and action items from National Training conference calls and training activities
 - Record of all teleconferences and meetings regarding Changes to SOPs and QAPP
 - Special Field activities or studies, e.g. comparisons of different samplers, separators or methods for collecting field blanks
4. Results from independent PTs administered by internal and external parties.

IV. Additional Analyses

1. The contractor shall identify any indicators that suggest new or further analyses might be warranted. WAM will provide additional directives if more analyses are necessary. The need for additional hours will be assessed at that time.

Work Area 6: SUPPORT FOR PEP FIELD OPERATIONS TRAINING for PM_{2.5}, PM_{10 - 2.5} and Lead (Pb)

The certification events that involve hands-on training will encompass PM_{2.5}, PM_{10 - 2.5} and High-and low-volume Lead (Pb). Web-based exercises will be grouped by PM_{2.5}/PM_{10-2.5} or High-and low-volume Lead (Pb).

Task 10: The contractor shall provide logistical support and prepare training class materials for each training session, which shall include:

- Class roll and attendance list in an Excel spreadsheet format,
- Training agenda
- Assembled Filter Shipping packages with shipping labels, labeled filter cassettes, Chain-of-Custody Forms and Field Data Sheets, EPA will supply all the materials
- CDs with current versions of resource materials and special presentations for the current year training course such as Collocation Study results, Bias results by Regions, and Field Blank results from the preceding year, the current Field SOP, the QAPP, and important operators manuals, e.g. the BGI PQ200A and Tisch high volume TSP samplers and the BGI HiVol Cal and Tetra Cal multi calibrators.
- Resource materials shall also be made available on the QA Website
- The contractor shall prepare PM_{2.5} & PM_{10-2.5} Training Course Proficiency Evaluation Materials
 - In previous work assignments, a pre-training-course study exercise was created for new PM_{2.5}-PEP field operators that must attend initial certification training. Trainees submit this exercise for grading when they arrive for class. The contractor shall review this exercise for outdated material and revise according to the current SOPs and QAPP.
 - A list of 150 written exam questions that will be used in the training courses has also been compiled previously. For the physically-attended course, the contractor shall review the written exam for outdated material and revise it according to the current SOP and QAPP. They shall choose 100 exam questions for the upcoming course and generate an answer key for the instructor staff. EPA will print these questions prior to the training course.

Task 11: The contractor shall provide Pb-PEP Training Course Support

- The contractor shall review Pb-PEP training material for new field scientists based on the Field Activities SOP and draft QAPP that currently exist. The WAM will provide MS Word and PDF file copies. The contractor shall identify differences in the training materials. These materials shall include:
 - A summary of key elements from the current draft QAPP that Field and Lab scientists should be aware of in the current implementation activities.
 - A pre-training-course study exercise that must be completed by trainees and turned in upon arrival at the certification training.
 - A draft list of 75 written exam questions that could be used to cover important facts or concepts and activities to be learned during training courses

- The contractor shall recommend 50 exam questions for the annual certification/recertification and generate an answer key for the instructor staff. The WAM will approve these or direct inclusion of other questions. EPA will print and distribute the exam during the training course.

TASK 12. The contractor shall maintain data base for storage of auditor certification data. This data base is accessible through the QA web portal. The contractor shall finalize the excel template devised in the previous work assignment for OAQPS and Regional Trainers to record registration and graduation from all QA training activities regarding ambient air monitoring programs. The contractor shall use the Excel template to update current certifications of those who complete the training requirements. This template will be transferred by OAQPS to the contractor at the end of any quarter in which certification training was conducted. The contractor shall maintain the routine functionality of the data base to report the current certification status of the listed participants.

TASK 13. The Contractor shall Perform XRF analysis of 47 mm Teflon© filters for Pb deposition

- Analyze Confirmatory Analysis Samples

The Contractor shall analyze 6 audit filters whose Pb content has been independently confirmed to demonstrate competency for analyzing for Pb using XRF. The results of the audit samples shall be discussed and compared to historical precision estimates before proceeding to the following tasks.

- XRF Analysis of Pb-PEP 46.2mm Teflon© Filters

The Pb-PEP requires the analysis of approximately 150 46.2mm Teflon© low volume filters. Battelle shall complete the following tasks related to the analysis and handling of the filters, and data review.

A. Sample Receipt

The XRF laboratory can expect to receive approximately 150 46.2mm Teflon© filters annually. The filters are not expected to arrive on a routine schedule. The audit filter media originate from the Region 4 filter weighing laboratory, and the auditor originates the Chain of Custody. Audits are completed according to individual schedules set in the EPA regions; therefore, the laboratory shall be flexible in receiving and batching filters. Samples will arrive in cassettes at ambient temperature with a Chain of Custody from the auditor. Monthly, the laboratory shall return the cassettes to the Region 4 laboratory. Shipping costs shall be covered by the EPA shipping contract with UPS. Currently, there is a backlog of audit filters, and the laboratory can expect several shipments of 20 to 30 filters for analysis.

B. Conduct the XRF Analysis

There is no published holding time for the XRF filters; however, Pb-PEP requests that filters should be analyzed within 30 days and results uploaded to the QA website within 15 days. The XRF laboratory shall meet the following quality control requirements and Pb-PEP program requirements as stated in the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, May 2013. The applicable references for XRF laboratory activities are below:

C. Data Processing, Validation, and Reporting

The XRF laboratory shall conduct quality assurance on the XRF data generated as a component of the validation procedure. The data shall also be subject to the routine quality control built into the XRF laboratories quality system. Upon validation, the data shall be submitted to the QA website operated by Battelle. The XRF laboratory must coordinate with Battelle to upload the data.

- Chain of Custody – Each filter received shall have its own chain of custody that was originated by the independent PEP field scientist or the SLT site auditor or operator and completed by the laboratory.
- Lab Report – Each batch shall have a report generated by the laboratory that summarizes samples analyzed, quality assurance/control, results, XRF run details, and detection limits and flags.
- Electronic Data Deliverable – Each batch shall also have an electronic data deliverable (EDD) to allow electronic pairing of laboratory data with corresponding field data. The QA website requires an Excel spreadsheet with specific formatting. An example EDD is attached to this WA. As the new version of the QA website is created, the format could change. The laboratory should coordinate with Battelle to ensure compatibility.

IV. Schedule of Tasks and Deliverables:

| Task or Deliverable | Due Date |
|---|---|
| Task 1: Work Plan | Per Contract requirements and WA issuance date. |
| Task 2: Develop organizational chart for all programs and supporting activities and data management systems to plan re-engineering of PEP | 60 days after initiation of the WA |
| Task 2: Compile list of recommended changes to data management system and output reports | 60 days after initiation of the WA |
| Task 2: Complete programming of SQL data base (PED) to replace current Access version. | Beta test version due, 120 days after the initiation of the WA. Final due 30 days after WAM provides comments from Beta Test. |

| | |
|--|---|
| Task 3: Loading data into AQS until Regional PEP leads assume the responsibility | Results shall be posted monthly |
| Task 3: Develop manual or "cheat sheet" for the EPA Regional PEP contact or contractor for loading PM _{2.5} and PM _{10-2.5} results into AQS | Provide draft 30 days after AQS completes the new QA transaction for posting PEP data; final due 30 days after the draft |
| Task 4: Edited draft of PM _{2.5} and PM _{10-2.5} Laboratory SOP; | 60 days after the WA has been issued |
| Edited Draft of PM _{2.5} and PM _{10-2.5} field SOP.. | 30 days after conclusion of Training Course scheduled April 20 -25. |
| Draft of PM _{2.5} and PM _{10-2.5} QAPP | 45 days after conclusion of Training Course scheduled April 20 -25. |
| Task 6: Edited draft of Pb-PEP SOP and QAPP | 45 days after WAM has provided draft changes |
| Task 7: Draft 2011-2013 3-year report for PM _{2.5} and PM _{10-2.5} | July 31, 2015 |
| Draft 2014 Annual report PM _{2.5} and PM _{10-2.5} | November 30, 2015 |
| Task 8: Draft 2010-2012 3 year report for Pb-PEP | December 10, 2015 |
| Tasks 10 & 11: Training course materials | April 17, 2015 |
| Task 12: updated training spreadsheet | August 31, 2015 |
| Task 13. Transfer XRF Data from lab to QA web data base Monthly assuming filters have been submitted to DRI for analysis | Filters should be analyzed within 30 days and results uploaded to the QA website within 15 days. The contractor should plan to post available data monthly. |

IV. REPORTING REQUIREMENTS

In accordance with the terms of the contract, the Contractor shall submit a cost estimate for accomplishing this work assignment. The estimated cost shall include all categories of direct labor, overhead, special testing, consultant and subcontractor costs, other direct costs, and estimated fee. In addition to the cost estimate, the Contractor shall submit a work plan. The work plan shall include an introduction, project approach, schedule of work, and staffing.

The Contractor shall submit monthly progress reports which summarize the overall progress plus a description for each task or logical segment of work on which effort was expended during the month. Any problems (Technical or administrative) that have developed shall be listed and shall continue to be listed until resolved. The report shall include a section showing cost and labor hours expended to date, and projected expenditures and labor hours at completion. Each report shall be submitted in accordance with the terms of the contract.

Contractor: Battelle Memorial Institute
Work Assignment Number 3-04

Contract Number EP-D-13-005
Work Assignment Manager: Dennis Crumpler
Alternate Work Assignment Manager: Greg Noah

All draft, final draft or final documents should be submitted as electronic digital files on a compact disc in both PDF and Microsoft Word for Windows format. The contractor should remain cognizant of the current version of Microsoft Word that the EPA is using. At this time Microsoft VISTA products are not acceptable formats.

During the period of performance of this assignment, the contractor shall immediately inform the Work Assignment Manager (WAM) by telephone of any problems that may impede performance along with any corrective action needed by the Contractor or EPA to solve the problem

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

3-04

☐

Other

☒

Amendment Number:

000001

Contract Number

EP-D-13-005

Contract Period 01/01/2014 To 12/31/2014

Base

Option Period Number 2

Title of Work Assignment/SF Site Name

Support Monitoring QA Programs

Contractor

BATTELLE MEMORIAL INSTITUTE

Specify Section and paragraph of Contract SOW

Tasks: 1, 3, 4 & 8

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 01/30/2015 To 12/31/2015

Comments:

Title: Tech Support for the National Monitoring Networks QA Program. This change revises the SOW - see Attachment 1. A revised work plan & cost estimate is due within 10 business days of the effective date of this change. To the best of our knowledge, this work does not duplicate any work prev. performed, or currently being performed by this office.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
|------|----------------|----------------------|-------------------------------|----------------------------|----------------------------|-------------------------|------------------|---------|-------------------------|--------------------------|
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Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

01/01/2014 To 12/31/2014

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee:

LOE:

Cumulative Approved:

Cost/Fee:

LOE:

Work Assignment Manager Name Dennis Crumpler

Branch/Mail Code:

Phone Number 919-541-0871

FAX Number:

(Signature)

(Date)

Project Officer Name Jeff Curry

Branch/Mail Code:

Phone Number: 919-541-4018

FAX Number: 919-541-4267

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Antonio L. Leathers

Branch/Mail Code:

Phone Number: 919-541-2312

FAX Number:

(Signature)

(Date)

| | | | | | | | | | | |
|---|----------------|---|-------------------------------|----------------------------|----------------------------|------------------------------|------------------|---------|-------------------------|--------------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | Work Assignment Number 3-05 | | | | | | | | |
| | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | | | | | |
| Contract Number EP-D-13-005 | | Contract Period 01/01/2013 To 12/31/2017 Base Option Period Number 2 | | | | | | | | |
| Contractor BATTELLE MEMORIAL INSTITUTE | | Title of Work Assignment/SF Site Name CSN Data Assessments | | | | | | | | |
| Specify Section and paragraph of Contract SOW Task 3 | | | | | | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | Period of Performance From 03/30/2015 To 12/31/2015 | | | | | | | | |
| Comments: Title: Chemical Speciation Network (CSN) Data Assessments. This is a continuation of Work Assignment 2-01. This WA includes 250 hours to prepare the work plan and begin work. See Task 1 for work plan requirements. To the best of our knowledge, this work does not duplicate any work previously performed, or currently being performed by this office. | | | | | | | | | | |
| <input type="checkbox"/> Superfund | | Accounting and Appropriations Data | | | | | | | | |
| | | <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | |
| Note: To report additional accounting and appropriations data use EPA Form 1900-69A. | | | | | | | | | | |
| SFO <input type="checkbox"/> (Max 2) | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
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| Contract Period: | | Cost/Fee: | | LOE: | | | | | | |
| 01/01/2013 To 12/31/2017 | | | | | | | | | | |
| This Action: | | | | | | | | | | |
| Total: | | | | | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | Cost/Fee: | | LOE: | | | | | | |
| Cumulative Approved: | | Cost/Fee: | | LOE: | | | | | | |
| Work Assignment Manager Name Elizabeth Landis | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number 919-541-2262 | | | | |
| | | | | | | FAX Number: | | | | |
| Project Officer Name Jeff Curry | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 919-541-4018 | | | | |
| | | | | | | FAX Number: 919-541-4267 | | | | |
| Other Agency Official Name | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: | | | | |
| | | | | | | FAX Number: | | | | |
| Contracting Official Name Antonio L. Leathers | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 919-541-2312 | | | | |
| | | | | | | FAX Number: | | | | |

Contract Number: EP-D-13-005
Contractor: Battelle Memorial Institute
Work Assignment Manager: Elizabeth Landis

Work Assignment Number: 3-05

STATEMENT OF WORK

I. TITLE: "Chemical Speciation Network (CSN) Data Assessment"

II. BACKGROUND

The deployment of a PM monitoring network is a critical component in the national implementation of the PM NAAQS. The ambient data from this network drives an array of regulatory decisions, ranging from designating areas as attainment or nonattainment, to developing cost-effective control programs and tracking the progress of such programs. Data derived from the PM monitoring network include both aerosol mass measurements and chemical speciation data. Mass measurements are used principally for PM NAAQS comparison purposes in identifying areas that meet or do not meet PM NAAQS, and in supporting designation as attainment or non-attainment. Chemical speciation data serve the implementation needs associated with developing emission mitigation approaches to reduce ambient aerosol levels and a variety of research and modeling needs. These measurements also provide support for regional haze assessments. The PM Chemical Speciation Network (CSN) consists of approximately 50 Trends sites for routine speciation monitoring and another 100 or so sites for state/local driven monitoring needs. There are several data evaluation and assessment needs that can be used to inform decision-making and improve the overall quality of data generated by the CSN monitoring network.

III. STATEMENT OF WORK

Note: The Contractor shall not publish or present results from this work assignment without prior notification and review by EPA.

The Contractor shall provide the following:

TASK 1 – Cost Estimate and Delivery Schedule

This Work Assignment is a follow-on to WA 2-01. A new work plan is required. The Contractor shall submit a work plan, cost estimate, and a delivery schedule in accordance with the terms of the contract.

TASK 2 – CSN Field Blank Data

NOTE: All plots and statistics shall also be provided in electronic format, along with a summary report explaining the results and how they were obtained. All reports listed in Task 2 shall be developed in SAS in a manner that can be used to regenerate reports with different conditions (e.g., change year). The SAS code shall be made available to EPA as a product of the WA. Where appropriate, the sampling method shall be noted, as certain samplers have changed since the beginning of the network.

The Contractor shall make the following revisions to the reports and SAS code from WA 2-01 as they relate to Task 2.

- A. The Contractor shall incorporate editorial comments, grammatical corrections, and other small edits provided by the WAM that are necessary to improve the clarity and readability of the report.
- B. The Contractor shall restructure the report such that an executive summary with conclusions and recommendations provided upfront.
- C. The Contractor shall review the IMPROVE analysis relating CSN and IMPROVE_A carbon and include a discussion as to why this approach was not appropriate for relating old and new CSN carbon. If it is determined that this approach should be considered, additional analysis shall be done and included in the final report. The IMPROVE report can be found at http://vista.cira.colostate.edu/improve/Publications/Workshops/Carbon_Oct2010/Carbon_Spatial_temporal_Patterns_Schichtel.pdf
- D. In consultation with the WAM, a small number of sites (10-15) shall be identified for investigation of the trend. The Contractor shall establish the OC and EC trend prior to the method conversion, after the conversion, and an adjusted trend after to the conversion using the equation established to relate old and new carbon. The goal is to show that the equation relating old and new CSN carbon or old CSN carbon and IMPROVE_A can be used to adjust for the conversion and prevent a break or step function in the concentration trend for OC and EC.
- E. The Contractor shall add the appropriate units to all tables, figures, and axis. The Contractor shall improve the clarity and readability of all tables and figures.
- F. The Contractor shall determine a more effective way to visually display that the equations relating old and new carbon and old and IMPROVE carbon are working (Figures 6-9 in WA 2-01 report). This may include time series plots that are overlaid, time series plots of the difference between the actual and the projected values, trend plots described in step 4 above, or other graphing techniques as determined by the contractor.

IV. DELIVERABLES

| Task | Deliverables | Due Date |
|------|--|---|
| 1 | Work Plan and Cost Estimate | In accordance with the terms of the contract. |
| 2 | CSN Field Blank Data – SAS code, tables & updated summary report | December 31, 2015 |
| 3 | CSN Relating Carbon Measurements – SAS code, tables & updated summary report | December 31, 2015 |

[END]

| | | | | | | | | | | |
|--|----------------|---|-------------------------------|----------------------------|----------------------------|----------------------------|------------------|---------|-------------------------|--------------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | Work Assignment Number 3-06 | | | | | | | | |
| | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | | | | | |
| Contract Number EP-D-13-005 | | Contract Period 01/01/2013 To 12/31/2017 Title of Work Assignment/SF Site Name Pb Anal Audit Web Prep | | | | | | | | |
| Contractor BATTELLE MEMORIAL INSTITUTE | | Specify Section and paragraph of Contract SOW Tasks 3 & 11 | | | | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | Period of Performance From 03/30/2015 To 12/31/2015 | | | | | | | | |
| Comments: Title: Pb Analysis Audit Website Preparation. This is a continuation of Work Assignment 2-05. The WA includes 30 hours to prepare the Work Plan and begin work. See Task 1 for work plan requirements. To the best of our knowledge, this work does not duplicate any work previously performed, or currently being performed by this office. | | | | | | | | | | |
| <input type="checkbox"/> Superfund | | Accounting and Appropriations Data | | | | | | | | |
| | | <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | |
| Note: To report additional accounting and appropriations data use EPA Form 1900-69A. | | | | | | | | | | |
| SFO (Max 2) <input type="checkbox"/> | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
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| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: | | Cost/Fee: | | | | LOE: | | | | |
| 01/01/2013 To 12/31/2017 | | | | | | | | | | |
| This Action: | | | | | | | | | | |
| Total: | | | | | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | Cost/Fee: | | | | LOE: | | | | |
| Cumulative Approved: | | Cost/Fee: | | | | LOE: | | | | |
| Work Assignment Manager Name Michael Papp | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) _____ (Date) | | | | | | Phone Number 919-541-2408 | | | | |
| | | | | | | FAX Number: | | | | |
| Project Officer Name Jeff Curry | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) _____ (Date) | | | | | | Phone Number: 919-541-4018 | | | | |
| | | | | | | FAX Number: 919-541-4267 | | | | |
| Other Agency Official Name | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) _____ (Date) | | | | | | Phone Number: | | | | |
| | | | | | | FAX Number: | | | | |
| Contracting Official Name Antonio L. Leathers | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) _____ (Date) | | | | | | Phone Number: 919-541-2312 | | | | |
| | | | | | | FAX Number: | | | | |

Contract Number: EP-D-13-005
Contractor: Battelle Memorial Institute
Work Assignment Number: 3-06
Work Assignment Manager: Michael Papp

STATEMENT OF WORK

I. TITLE: Pb Analysis Audit Website Preparation

II. PROJECT BACKGROUND

Each year EPA offers to develop Pb Analysis Audits for monitoring organizations performing Pb monitoring. The requirement for these audits can be found in 40 CFR Part 58 Appendix A Section 3.3.4.2. Starting May 2015, EPA will solicit monitoring organization points of contact (POC) to submit the type and quantity of audits it would like to receive for the upcoming calendar year. In 2013, under WA 1-03, Battelle developed an entry system on its website¹ for state/local/tribal monitoring organizations to enter their order electronically. This WA will be used to get the web site ready for 2015 orders for Pb Analysis Audits for calendar year 2016.

III. STATEMENT OF WORK

Task 1. Work Plan and Cost Estimate

This Work Assignment is a follow-on to WA 2-05. A new work plan is not required. The contractor shall submit a revised cost estimate, broken out by task and subtask, and a revised delivery schedule in accordance with the terms of the contract.

Task 2. Update and Implementation of Audit Selection Form.

Similar to the Ambient Air Protocol Gas Verification Program (AA-PGVP) Survey, EPA currently maintains a point of contact for each monitoring organization currently monitoring for Pb. Battelle will complete the following subtasks:

A: Web Entry System Review

EPA and Battelle will review the current entry system to determine if any changes are necessary. Since the system seemed to work well in 2013, it is not anticipated any major revisions will be needed.

- Battelle and EPA will work together to create what is believed to be the most current list of point of contacts (POC) for each monitoring organization and send an email out to each POC alerting them to website entry date and to allow them to identify an alternate POC for their organization. This will occur by end of April, 2015

- Battelle will prepare the website for 2015 entry starting May 1, 2015. The

¹ <https://www.sdas.battelle.org/AirQA/>

entry system will be preloaded with POC data.

B: Instruction Guide Revision

In WA1-03 a simple set of instructions was developed and posted on the Website explaining how the entry system will work for

- POCs already in the system, or
- new POCs, either for a new PQAO or replacing a current PQAO

If revisions occur in Task 2A, Battelle shall revise the guidance document to reflect the changes.

C: Data Base Assistance/Maintenance/Manipulation/Notification

Battelle will provide phone and email assistance to those requesting help.

Battelle will maintain the integrity of the data through back up/security procedures documented in the QAPP developed for this overall ambient air web site.

Battelle will provide two lists to EPA monthly:

1. Point of contact emails address, PQAO and agency name of those completing the form.
2. Point of contact email address, PQAO and agency name of those not completing the form

Every two weeks Battelle will send a “reminder” email to those organizations on the list that have not completed the form. EPA will review the email messages sent in 2014 and will revise as necessary for the 2015 email. The reminder message will start May 1, and end July 1, 2015.

D: Order Summary Report

After the ordering ends (July 1, 2015), Battelle will produce a summary report of all fields in the order form for all those agencies that have submitted an order and will include totals for number of TSP audits, PM10 Teflon for ICP-MS, and for PM10 Teflon for XRF analysis. This report will be sent to EPA and all the monitoring agencies as a “Final Order Tally”.

IV. DELIVERABLES

TABLE 1. List of Deliverable and Due Dates

| Task | Deliverables | Due Date |
|------|--------------------------------------|---|
| 1 | Work Plan and Cost Estimate | In accordance with the terms of the contract. |
| 2a | POC Letter | April 30, 2015 |
| 2a | Website available and data preloaded | May 1, 2015 |
| 2b | Instruction Guide Complete | April 30, 2015 |
| 2c | Data manipulation/notifications | May 1 – July 1, 2015 |
| 2d | Order Summary Report | Aug 10, 2015 |

V. REPORTING REQUIREMENTS

The reporting requirements shall be in accordance with the terms and conditions in the contract.

[END]

| | | | |
|---|----------------|--|-------------------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | Work Assignment Number 3-07 | |
| | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | |
| Contract Number EP-D-13-005 | | Contract Period 01/01/2013 To 12/31/2017 Base Option Period Number 2 | |
| Contractor BATTELLE MEMORIAL INSTITUTE | | Title of Work Assignment/SF Site Name PAMS QA Program Implementation | |
| Specify Section and paragraph of Contract SOW SOW Task 2 | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | Period of Performance From 01/01/2015 To 12/31/2015 | |
| Comments: Title: PAMS QA Program Implementation Plan. This is a new Work Assignment (WA). This WA includes 50 hours to prepare the work plan and begin work. See Task 1 for work plan requirements. To the best of our knowledge, this work does not duplicate any work previously performed, or currently being performed by this office. | | | |
| <input type="checkbox"/> Superfund | | Accounting and Appropriations Data | |
| | | <input checked="" type="checkbox"/> Non-Superfund | |
| Note: To report additional accounting and appropriations data use EPA Form 1900-69A. | | | |
| SFO (Max 2) <input type="checkbox"/> | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) |
| | | | Budget Org/Code (Max 7) |
| | | | Program Element (Max 9) |
| | | | Object Class (Max 4) |
| | | | Amount (Dollars) |
| | | | (Cents) |
| | | | Site/Project (Max 8) |
| | | | Cost Org/Code (Max 7) |
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| 3 | | | |
| 4 | | | |
| 5 | | | |
| Authorized Work Assignment Ceiling | | | |
| Contract Period: | | Cost/Fee: | |
| 01/01/2013 To 12/31/2017 | | LOE: | |
| This Action: | | | |
| Total: | | | |
| Work Plan / Cost Estimate Approvals | | | |
| Contractor WP Dated: | | Cost/Fee: | |
| | | LOE: | |
| Cumulative Approved: | | Cost/Fee: | |
| | | LOE: | |
| Work Assignment Manager Name Michael Papp | | Branch/Mail Code: | |
| | | Phone Number 919-541-2408 | |
| | | FAX Number: | |
| (Signature) _____ (Date) _____ | | Branch/Mail Code: | |
| Project Officer Name Brandon Hawkins | | Phone Number: 919-541-0880 | |
| | | FAX Number: | |
| (Signature) _____ (Date) _____ | | Branch/Mail Code: | |
| Other Agency Official Name | | Phone Number: | |
| | | FAX Number: | |
| (Signature) _____ (Date) _____ | | Branch/Mail Code: | |
| Contracting Official Name Antonio L. Leathers | | Phone Number: 919-541-2312 | |
| | | FAX Number: | |
| (Signature) _____ (Date) _____ | | | |

Contract Number: EP-D-13-005
Contractor: Battelle Memorial Institute
Work Assignment Number: 3-07
Work Assignment Manager: Michael Papp

STATEMENT OF WORK

I. TITLE: PAMS QA Program Implementation Plan

II. PROJECT BACKGROUND

The PAMS program is currently undergoing a revision to the implementation of this program. In general the program will have a core network of sites where there will be more requirements for measuring and reporting pollutants and a flexible program where monitoring organizations will have more opportunity to determine what to implement. From a quality system standpoint EPA needs to develop an Implementation Plan (IP) which will describe the changes to the QA program and the responsibilities of monitoring organization, the EPA Regions and OAQPS for implementation of the quality systems for the core network.

III. STATEMENT OF WORK

Task 1. Work Plan and Cost Estimate

The Contractor shall meet with the Work Assignment Manager (WAM) to discuss the WA tasks and deliverables. This meeting can be via teleconference. The contractor shall then prepare and submit a Work Plan for this WA.

Task 2. Development of the PAMS QA Program Implementation Plan.

The process to develop the IP will include a review of IPs developed for other programs, a series of conference calls to decide what should be included in the PAMS IP, development of the draft Plan, responding to comments, and a final revision based on these comments. Battelle will complete the following subtasks:

A: Review PM2.5 PEP Implementation Plan

EPA and Battelle will review the PM2.5 PEP IP to understand the structure of this plan and how to develop a similar IP for the PAMS quality system. A series of conference calls will be used to discuss the QA program and minimally agree on the QA aspects of the program which will eventually be described in more detail in a PAMS Technical Assistance Document and Generic QAPP.

B: Development of Draft QA Program Implementation Plan

Battelle will develop the draft IP based upon the outline below that will be enhanced through conference calls.

1. Introduction
 - 1.1. PAMS Program
 - 1.2. PAMS QA Program
 - 1.3. Purpose of this Document
2. Roles and Responsibilities
 - 2.1. PAMS QA Workgroup
 - 2.2. EPA Office of Air Quality Planning and Standards
 - 2.3. EPA Regional Offices
 - 2.4. Support Contractors
 - 2.5. State, Local, and Tribal Agencies
3. Communications
 - 3.1. Planning/Implementation/Assessment/Reporting
 - 3.2. AMTIC
 - 3.3. AQS
4. Time Lines and Milestones
 - 4.1. Planning/Implementation/Assessment/Reporting Time Lines
5. Resources
 - 5.1. Source of Funds
 - 5.2. Resource Estimates
 - 5.3. Personnel
 - 5.4. Equipment
 - 5.5. SOPs, QAPPs, and Documents
 - 5.6. Training resources
6. Logistics
 - 6.1. Program Initialization
 - 6.2. Field Logistics
 - 6.3. Laboratory Logistics
7. Quality Assurance/Quality Control
 - 7.1. QA Roles and Responsibilities
 - 7.2. Planning
 - 7.3. QA/QC Implementation
 - 7.4. Assessments
 - 7.5. Reporting
8. Training and Certification of Personnel
 - 8.1. Training Program
9. Data Management
10. Summary
 - 10.1. Potential Problems and Resolutions

C: Draft Review

The Draft IP will be distributed to the PAMS QA Workgroup and those monitoring organizations implementing the core network. Battelle will provide a one-month review period. Battelle will consolidate review comments which will be discussed on

conference calls to determine whether they will be included in the IP.

D. Finalize QA Program IP

Comments from the review process will be incorporated into a final IP and a Word Document and PDF will be provided to EPA.

IV. DELIVERABLES

TABLE 1. List of Deliverable and Due Dates

| Task | Deliverables | Due Date |
|------|-----------------------------|---|
| 1 | Work Plan and Cost Estimate | In accordance with the terms of the contract. |
| 2B | Draft IP | Oct 28, 2015 |
| 2C | Comments | Nov 27, 2015 |
| 2D | Final Document | Dec 31, 2015 |
| | | |
| | | |

V. REPORTING REQUIREMENTS

The reporting requirements shall be in accordance with the terms and conditions in the contract.

[END]

| | | | |
|--|----------------|---|-------------------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | Work Assignment Number 3-08 | |
| | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | |
| Contract Number EP-D-13-005 | | Contract Period 01/01/2013 To 12/31/2017 Title of Work Assignment/SF Site Name Pb Audit Strip Development | |
| Contractor BATTELLE MEMORIAL INSTITUTE | | Specify Section and paragraph of Contract SOW SOW Task 3 | |
| Purpose: <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Work Plan Approval </div> <div> <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Incremental Funding </div> </div> | | Period of Performance From 01/01/2015 To 12/31/2015 | |
| Comments: THIS WORK ASSIGNMENT INCLUDES 65 HOURS FOR THE DEVELOPMENT OF A WORK PLAN/COST ESTIMATE, AND TO INITIATE THE WORK ASSIGNMENT. THE CONTRACTOR SHALL PREPARE A WORK PLAN AND COST ESTIMATE TO SATISFY THE REQUIREMENTS OF THE ATTACHED STATEMENT OF WORK (SOW). TO THE BEST OF OUR KNOWLEDGE, THIS WORK DOES NOT DUPLICATE ANY WORK PREVIOUSLY PERFORMED OR CURRENTLY BEING PERFORMED BY THIS OFFICE. | | | |
| <input type="checkbox"/> Superfund | | Accounting and Appropriations Data | |
| | | <input checked="" type="checkbox"/> Non-Superfund | |
| Note: To report additional accounting and appropriations data use EPA Form 1900-69A. | | | |
| SFO (Max 2) <input type="checkbox"/> | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) |
| | | | Budget Org/Code (Max 7) |
| | | | Program Element (Max 9) |
| | | | Object Class (Max 4) |
| | | | Amount (Dollars) |
| | | | (Cents) |
| | | | Site/Project (Max 8) |
| | | | Cost Org/Code (Max 7) |
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| Authorized Work Assignment Ceiling | | | |
| Contract Period: 01/01/2013 To 12/31/2017 | | Cost/Fee: _____ LOE: _____ | |
| This Action: _____ | | | |
| Total: _____ | | | |
| Work Plan / Cost Estimate Approvals | | | |
| Contractor WP Dated: _____ | | Cost/Fee: _____ LOE: _____ | |
| Cumulative Approved: _____ | | Cost/Fee: _____ LOE: _____ | |
| Work Assignment Manager Name Michael Papp _____ (Signature) _____ (Date) _____ | | Branch/Mail Code: _____ Phone Number 919-541-2408 FAX Number: _____ | |
| Project Officer Name Brandon Hawkins _____ (Signature) _____ (Date) _____ | | Branch/Mail Code: _____ Phone Number: 919-541-0880 FAX Number: _____ | |
| Other Agency Official Name _____ (Signature) _____ (Date) _____ | | Branch/Mail Code: _____ Phone Number: _____ FAX Number: _____ | |
| Contracting Official Name Antonio L. Leathers _____ (Signature) _____ (Date) _____ | | Branch/Mail Code: _____ Phone Number: 919-541-2312 FAX Number: _____ | |

Contract Number: EP-D-13-005
Contractor: Battelle Memorial Institute
Work Assignment Number: 3-08
Work Assignment Manager: Michael Papp

TITLE: Pb Audit Strip Development

I. PROJECT BACKGROUND

On October 15, 2008, EPA substantially strengthened the national ambient air quality standards (NAAQS) for lead. The revised standards are 10 times tighter than the previous standards and will improve health protection for at-risk groups, especially children.

EPA has revised the level of the primary (health-based) standard from 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), to $0.15 \mu\text{g}/\text{m}^3$, measured as total suspended particles (TSP). EPA has revised the secondary (welfare-based) standard to be identical in all respects to the primary standard.

Due to the revision of the Pb NAAQS, a number of changes were made to the Ambient Air QA Program for Pb. One change made was reducing the concentration of the Pb-strip audits relative to the lowering of the NAAQS.

| Level | Prior Regulation | | Current Regulation | | |
|-------|---|--|---|--|--------------------------------|
| | Pb Conc ($\mu\text{g}/\text{strip}$) | Ambient Air Conc* ($\mu\text{g}/\text{m}^3$) | Pb Conc ($\mu\text{g}/\text{strip}$) | Ambient Air Conc* ($\mu\text{g}/\text{m}^3$) | Conc Percentage of NAAQS |
| 1 | 100 - 300 | 0.5 - 1.5 | 9 - 30 | 0.04 - 0.15 | 30-100% |
| 2 | 600 - 1000 | 3.0 - 5.0 | 60 - 90 | 0.30 - 0.45 | 200-300% |

* Equivalent ambient Pb concentration in $\mu\text{g}/\text{m}^3$ is based on sampling at $1.7 \text{ m}^3/\text{min}$ for 24 hours on a 20.3 cmX25.4 cm (8X10 inch) glass fiber filter.

PURPOSE: To prepare TSP strips at two concentration ranges and provide the results of each analysis. If replicate analysis results are acceptable and results between the Battelle and EPA referee labs are comparable, Battelle shall distribute these audits to Pb analyzing laboratories.

II. STATEMENT OF WORK

The Work Assignment (WA) Manager is authorized to provide technical direction and will also provide the Contractor with all filter media. The Contractor shall perform the following specific sub-tasks:

TASK 1 - Preparation of Work Plan

The Contractor shall prepare a work plan in accordance with the terms of the contract.

TASK 2: Development and Testing of Pb Analysis Audits- Filter Strips

1000 1-inch Pb strips shall be made at two concentrations ranges for a total of 500 strips per concentration. One concentration range shall be from 30-100% and a second from 200-300% of the current NAAQS. EPA suggests strip concentrations of around **15 µg/strip** for the low concentration and around **65 µg/strip** for the higher concentration. All strips within the selected concentration ranges shall be made at the same concentration. The strips shall be packaged individually to protect strip integrity. However, each lab will require 1 years worth of strips so 12 low concentration strips and 12 high concentration strips, for a total of 24 strips will also be bagged so that a group of 24 strips can be sent to a laboratory.

NOTE: based on orders, some labs have asked for more than multiples of 24 strips.

The Contractor shall develop the audit samples as indicated in the SOP developed for earlier work. The Contractor shall analyze the filters by ICP-MS following EQL-0510-191

The labeling of the strips will be "BAT-Filter Type-Year-Concentration-Filter Number"

- 1) Low Concentration Filter - "**BAT-TSP-2015-01-001**"
- 2) High Concentration Filter - "**BAT-TSP-2015-02-001**"

The strips will be made from lead solutions purchased from NIST and pipettes of known and tested accuracy and reliability.

Battelle shall analyze a minimum of 7 filters from each concentration in order to establish the audit strip concentrations. **Filters shall be considered acceptable if within +/- 5 percent relative standard deviation from the average of the determined values. Any filters not meeting this criteria shall be rejected and the Contractor shall be directed to remake the rejected level. All raw data and final concentrations shall be submitted to EPA.**

In addition, Battelle shall distribute six strips at each concentration to 3-4 laboratories named at a later date who will analyze them. The filter analysis for each of the labs listed above will also be considered acceptable **if within +/- 5 percent relative standard deviation from the average of the labs determined values and if the average concentration for each range is within 7% of the Contractors established concentration.**

TASK 3- Distribution of Pb Analysis Audits to Monitoring Agencies/labs

The Pb-Analysis Survey on the Battelle Website provides the order information for the agencies ordering the Pb analysis audits. Once referee analysis passes, Battelle will package and ship filters out 2-day mail to the laboratories using the EPA UPS account.

IV. DELIVERABLES

TABLE 1. List of Deliverable and Due Dates

| Task | Deliverables | Due Date |
|-------------|--|---|
| 1 | Work Plan and Cost Estimate | In accordance with the terms of the contract. |
| 2 | Development of Pb Analysis Audits- Filter Strips | Oct 9, 2015 |
| 2 | Referee testing | Nov 13, 2015 |
| 3 | Distribution of Pb strips to monitoring agencies/labs | Dec 1-15, 2015 |

V. REPORTING REQUIREMENTS

The reporting requirements shall be in accordance with the terms and conditions in the contract.

VI. QAPP REQUIREMENTS

Since Battelle performed this work in FY14 in which a QAPP was developed and approved they will be expected to conform to this QAPP unless Battelle provides revisions.

| | | | | | | | | | | |
|---|----------------|---|-------------------------------|----------------------------|----------------------------|------------------------------|------------------|---------|-------------------------|--------------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | Work Assignment Number 3-09 | | | | | | | | |
| | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | | | | | |
| Contract Number EP-D-13-005 | | Contract Period 01/01/2013 To 12/31/2017 Base Option Period Number 2 | | | | | | | | |
| Contractor BATTELLE MEMORIAL INSTITUTE | | Title of Work Assignment/SF Site Name 2016 NAAMC Support | | | | | | | | |
| Specify Section and paragraph of Contract SOW SOW Task 5 | | | | | | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | Period of Performance From 01/01/2015 To 12/31/2015 | | | | | | | | |
| Comments: This is a new Work Assignment (WA). This WA includes 120 hours to prepare the work plan and begin work. The contractor shall prepare a work plan and cost estimate to satisfy the requirements of the attached WA Statement of Work (SOW). To the best of our knowledge, this work does not duplicate any work previously performed or currently being performed by this office. | | | | | | | | | | |
| <input type="checkbox"/> Superfund | | Accounting and Appropriations Data | | | | | | | | |
| | | <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | |
| SFO <input type="checkbox"/> (Max 2) | | Note: To report additional accounting and appropriations date use EPA Form 1900-69A. | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code (Max 7) |
| 1 | | | | | | | | | | |
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| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: | | Cost/Fee: | | LOE: | | | | | | |
| 01/01/2013 To 12/31/2017 | | | | | | | | | | |
| This Action: | | | | | | | | | | |
| Total: | | | | | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | | | Cost/Fee: | | LOE: | | | | |
| Cumulative Approved: | | | | Cost/Fee: | | LOE: | | | | |
| Work Assignment Manager Name Laurie Trinca | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number 919-541-0520 | | | | |
| | | | | | | FAX Number: | | | | |
| Project Officer Name Brandon Hawkins | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 919-541-0880 | | | | |
| | | | | | | FAX Number: | | | | |
| Other Agency Official Name | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: | | | | |
| | | | | | | FAX Number: | | | | |
| Contracting Official Name Antonio L. Leathers | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 919-541-2312 | | | | |
| | | | | | | FAX Number: | | | | |

CONTRACT: EP-D-13-005

WORK ASSIGNMENT: WA 3-09

TITLE: National Ambient Air Monitoring Conference Support

WORK ASSIGNMENT CONTRACTING OFFICER'S REPRESENTATIVE (WACOR)

Laurie Trinca

OAQPS/AQAD/AAMG

US EPA

RTP, NC 27711

Telephone: 919-541-0520

ALTERNATE WACOR

Kevin Cavender

OAQPS/AQAD/AAMG

US EPA

RTP, NC 27711

Telephone: 919-541-2364

BACKGROUND:

The Automation and Analytical Management Group (AAMG), in conjunction with the National Association for Clean Air Agencies (NACAA), hosts a national ambient air monitoring conference every two years. The next conference is planned for late Summer or early Fall of 2016. The conference is intended to provide a national and international forum for EPA, State, local, tribal, international, and other agencies who are involved in implementing criteria pollutant and air toxics monitoring programs. This conference will provide a forum for discussing the implementation of ambient air monitoring changes to the monitoring networks as a result of revisions to the National Ambient Air Quality Standards (NAAQS) and ambient air monitoring regulations and a forum for data users to discuss and share information learned as a result of the data analysis and how this data is managed in our Air Quality Data System. This conference has been supported by Eastern Research Group (ERG) under subcontract with Sonoma Technologies, Inc (EP-D-09-097) for the past several years.

STATEMENT OF WORK:

The WACOR is authorized to provide technical direction in accordance with the terms of the contract. The following are the tasks the Contractor shall perform.

1. The contractor shall prepare a Work Plan, Cost Estimate and Monthly Progress Reports in accordance with the terms and conditions of this contract.
2. The contractor shall make arrangements for meeting facilities for approximately 600 people for four days (Monday through Thursday noon) and meeting facilities for approximately 50 people for 1 day (Thursday pm & Friday am). The Government anticipates the 2016 conference will be held during the August 2016 - September 2016

timeframe in the western half of the United States (Colorado, Washington, Oregon or California). The contractor shall negotiate with a hotel, based on the above mentioned parameters, and secure the necessary and acceptable conference space. The contractor shall provide the WACOR a report detailing site locations in the Western United States and available time periods and arrange for a site visit if requested by WACOR.

Requirements shall include:

- a. Meeting space shall include an auditorium large enough to accommodate all conference attendees (approximately 600 people); wireless internet required
- b. Meeting space shall include 4 breakout rooms to accommodate approx 150-175 attendees in each room; wireless internet required in each room
- c. Meeting space shall include separate cohesive carpeted space for vendor exhibition and poster session
- d. Meeting space shall include a dedicated A/V support person in attendance at the meeting at all times to handle all A/V issues
- e. Sleeping rooms shall be offered at the prevailing government rate, with availability of a block of rooms from Sunday through Sunday, **internet access should be included for all rooms**
- f. Unless otherwise directed by the WACOR, the conference format shall be designed according to the attachment.

The contractor shall provide the WACOR with the availability and cost estimates for hotel facilities. Costs for audio visual equipment rental, workshop supplies and other direct costs shall also be included.

The contractor shall obtain the WACOR's written approval of hotel arrangements prior to finalizing the hotel contract.

3. The contractor shall provide conference support as follows:

- a. Supply online registration system and other meeting materials
 - I. Prepare a "Save the Date" notice and a "Conference Reminder" notice
 - II. Prepare and send email blast to previous conference attendees (using contact information collected previously)
 - III. Establish and maintain an on-line registration site
 - IV. Establish and coordinate with ambient air monitoring vendors to participate and be available during conference week
 - V. Prepare conference information packets/program
 - VI. Prepare attendee list
 - VII. Prepare Name tags for all attendees
 - VIII. Prepare posters/signs
- b. Set up and staffing of the registration area;
- c. Coordinate with hotel on meeting room setup, A/V equipment, poster board and vendor exhibit hall set up, daily refreshments
- d. Coordinate with WACOR and speakers on presentation materials, agenda items and any conference-related issues

4. The contractor shall obtain electronic copies of speaker biographies and presentation materials (saved in PDF format) and provide them to the WACOR no later than 3 weeks following the conference.
5. The contractor shall arrange for meeting space for a half day meeting Thursday afternoon and Friday morning of same week. Meeting space shall accommodate approximately 50 people.

6. Schedule of Deliverables

| Task | Deliverable | Delivery Schedule |
|------|---|---|
| 1 | Cost Estimate | Within 20 days of WA receipt |
| 1 | Progress Reports | Ongoing throughout WA |
| 2 | Hotel Block | Dec 2015 |
| 3 | Conference Support | Date TBD |
| 3 | Save the Date Notice | Date TBD |
| 3 | On-line Registration Site | Date TBD |
| 4 | Electronic Bios of speakers and PDF presentations | No later than 3 weeks following the conference. |
| 5 | Meeting space for Thursday/Friday meeting | Date TBD |
| | | |

***Any work not completed under this work assignment shall be continued on a follow on work assignment under the next option period.**

Attachment 1
Conference Format

I. Day prior to conference (start date TBD)

- a. Registration table with phone
- b. Conference materials to be at desk by noon
 - ii. Pre-registration for attendees from 5:00 – 7:00pm
 - iii. Registration desk shall remain open from day prior to conference start date to last day of conference
- c. Storage room/office
- d. Tripod easels identifying each session and room location
- e. Exhibitor and Poster Set-Up
 - i. WACOR shall provide final count needed of 8'x10' mix of free standing booths and table tops
 - ii. Facility provides one table, 2 chairs, and a wastebasket at each booth
 - iii. Set up shall take place in the afternoon prior to conference start

II. Day 1 (AM & PM)

a. Training Sessions

- i. 4 rooms accommodating approx 150-175 per room
- ii. Podium for each room
- iii. A/V cart, LCD projector, screen appropriate for room size for each room
- iv. 2 Wireless microphones for each room
- v. Wireless and/or hardline internet access

III. Day 2 (AM & PM)

a. Plenary Session

- i. Theater seating for 600
- ii. Podium, head table on riser for 5
- iii. A/V cart, LCD Projector, 2 screens (appropriate for room)
- iv. 4 Wireless microphones, 2 located in aisle for audience use
- v. Sound mixer
- vi. Wireless and/or hardline internet access
- vii. Breakout room(s) to accommodate multiple topic sessions

IV. Day 3 (AM & PM)

a. Breakout Sessions

- i. 4 rooms accommodating approx 150-175 per room

- ii. Podium for each room
- iii. A/V cart, LCD projector, screen appropriate for room size for each room
- iv. 2 Wireless microphones for each room
- v. Wireless and/or hardline internet access

V. Day 4 (AM)

a. Plenary Session or Breakout (TBD)

- i. Same format as Day 2

VI. Day 4 (PM)

- a. 1 room accommodating approximately 50 people
- b. A/V cart, LCD projector
- c. Wireless and/or hardline internet Access
- d. U-shaped seating

VII. Day 5 (AM)

- a. 1 room accommodating approximately 50 people
- b. A/V cart, LCD projector
- c. Wireless and/or hardline internet Access
- d. U-shaped seating